



Glenn Research Center



## Views of the Future — Spray Combustion/Hazardous Waste

- ◆ ***Spray and aerosol cloud combustion*** accounts for 25% of the world's energy use yet remains poorly understood from both a fundamental and practical perspective.
  - Characteristics of realistic sprays includes a liquid breakup region , multiphase flow, turbulent mixing, and flame interactions.
- ◆ **Idealization of spray configurations in a quiescent environment** (the starting point for models) has been impossible in 1g due to sedimentation of large droplets, buoyant plumes of post-combustion gases, and the need for mixing devices.
  - Microgravity offers the promise of such idealization.